

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Christopher M. Hanna
Title:	BTSC ENCODER
Serial No.:	09/638,245
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Examiner:	Ping Lee
Group Art Unit:	2615
Docket Number:	56233-139 (THTK-3DVCN)

Mail Stop Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL DECLARATION UNDER 37 C.F.R. § 1.132
OF LESLIE B. TYLER

Sir:

I, Leslie B. Tyler, being over the age of 21, aver as follows:

1. I am and have been President and Chief Executive Officer of That Corporation of Milford, Massachusetts (hereinafter "THAT"), the assignee of the above-identified application, since it was founded in 1989.

2. I have an BSEE degree from Cornell University, having graduated in 1975, and have worked in the Audio Engineering Field since graduation, including employment as Vice President of Engineering for THAT's predecessor, dbx, Inc., between 1981 and 1989, before founding THAT.

3. During the years from approximately 1979 through 1986, I served as dbx Inc.'s representative to the Broadcast Television Systems Committee ("BTSC") which developed, codified, and recommended to the FCC the BTSC standard for broadcasting multi-channel sound.

4. As a member of the BTSC, and as a former employee of BTSC proponent dbx, Inc., I am very familiar with and have first-hand knowledge of the history of the BTSC system development and selection.

5. I am also very familiar with and have knowledge about the history and content of the above-identified application, and its related applications. I have carefully reviewed pending claims 60-93 and 104-120, the Official action of July 11, 2008 and the Declaration of Dr. John Strawn Pursuant to 37 C.F.R. § 1.132 filed on April 15, 2009, all in connection with the above-identified application.

6. Shortly after the earliest application (from which the current application claims priority) was filed in 1996, THAT began manufacturing products including BTSC encoders which based on information and belief incorporated the subject matter defined by currently pending claims 60-93 and 104-120 of the above-identified application. The impetus for developing the digital technology defined by pending claims 60-93 and 104-120 (hereinafter the “Claimed Digital BTSC Technology”) came from THAT’s customers, who had been frustrated over the drift and limited performance of the analog solutions which THAT Corporation, and its predecessor, dbx, Inc., had offered up until the mid 1990s. These limitations included variations in response over time and temperature, the need for precise trim adjustments which tended to drift over time and temperature, and limitations on analog bandwidth which limited response at extremes of the audio frequency ranges. Such limitations manifested themselves most notably via loss of stereo (L vs R) separation in the transmission/reception system. THAT’s lead customer at the time, Standard Communications, was a prominent provider of television equipment to cable TV operators, and specifically requested that THAT produce a higher-performance version of a previously analog-only solution, i.e. a solution providing better stereo separation, especially at extremes of the audio frequency range, where the performance would be relatively unaffected by component ageing, temperature and drift.

7. After more than a year of effort, THAT produced a prototype which satisfied the customer, Standard Communications. The prototype was based largely upon the digital implementation described in the present application, and based on information and belief included the features covered by pending claims 60-93 and 104-120. Understanding the potential of this ground-breaking effort, THAT filed for patent protection on the underlying digital technology, which based on information and belief includes the claimed subject matter of the above-identified application defined by pending claims 60-93 and 104-120.

8. Over the period 1996 to 2001, THAT manufactured and sold many tens of thousands of broadcast-quality BTSC encoders, which based on information and belief incorporated the Claimed Digital BTSC Technology. By the year 2000, THAT had at least five different customers purchasing these BTSC encoders on a regular basis. In 2001, the company decided to exit the business of making BTSC encoders, and THAT licensed its customers to make the products themselves. Since then, the company's customers have sold many more tens of thousands of units, which based on information and belief incorporated the Claimed Digital BTSC Technology. The broad acceptance of these BTSC encoders is believed due to the advantages provided by the Claimed Digital BTSC Technology.

9. Since 1994 when THAT acquired then existing licenses of BTSC analog technology from the Bank of California, THAT has been involved in licensing BTSC technology including the Claimed Digital BTSC Technology. In the late 1990s, THAT was approached by a prominent integrated circuit (IC) manufacturing company to license THAT's analog and (then pending) digital patents within BTSC. This became the first of many. THAT currently has more than 10 major licensees who have implemented millions of BTSC encoder and decoder products each year, which based upon information and belief include the Claimed Digital BTSC Technology. THAT's licenses now include such familiar names as NXP (formerly Philips Semiconductors), Analog Devices, Asahi Kasei Microsystems, and many more. Based on information and belief, since first licensing the Technology to a third party in 1998, the number of BTSC implementations of the Claimed Digital BTSC Technology has grown significantly. Together, at the present time the company's licensees are responsible for manufacturing and selling products which based on information and belief include the Claimed Digital BTSC Technology and which provide literally millions of BTSC implementations per year.

10. The Technology has developed significantly since its start in the middle 1990s. THAT has applied for approximately 20 United States and 76 foreign patent applications related to TV audio technology in the past ten years. Many of these applications cover improvements to many of the well accepted core ideas that comprise the Claimed Digital BTSC Technology. THAT offers a complete suite of Verilog code for designing ICs which based on information and belief includes the Claimed Digital BTSC Technology, to prominent IC makers for many tens, often hundreds of thousands of dollars in start-up fees, plus a promise to pay royalties for each

instance of the royalty bearing products, which based on information and belief include the Claimed Digital BTSC Technology and which they manufacture and sell. I believe that these arrangements in which the IC manufacturers use the Verilog code to make ICs, which based on information and belief incorporate the Claimed Digital BTSC Technology are testaments to the broad commercial acceptance of the Claimed Digital BTSC Technology. Further, it is clear that if the Claimed Digital BTSC Technology was obvious to implement from the analog implementation which was known prior to the filing of the earliest priority date of the above-identified application, I believe that these IC companies would not need the Verilog code to implement the Claimed Digital BTSC Technology.

11. For the reasons stated in the Declaration of Dr. John Strawn Pursuant to 37 C.F.R. § 1.132 filed on April 15, 2009 in connection with the above-identified application, pending claims 60-93 and 104-120 would not have been obvious to one skilled in the art at the time the invention was made in view of the cited references to Fig. 1 of the application, Holt and Walker.

12. All this background serves, in my opinion, to substantiate the fact that there the claimed subject matter of the above-identified application defined by pending claims 60-93 and 104-120 served a long felt need, has enjoyed significant commercial success, and is a genuine invention that is both novel and non-obvious in view of the cited references to Fig. 1 of the application, Holt and Walker.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: May 18, 2009



Leslie B. Tyler

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